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10/710,019	06/13/2004	Sam Shiaw-Shiang Jiang	ASTP0043USA	4018

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EXAMINER
ANDREWS, LEON T

ART UNIT	PAPER NUMBER
2416	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/710,019	JIANG ET AL.	
	Examiner	Art Unit	
	LEON ANDREWS	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. **Claims 1-23 and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (Patent Number: 5,832,000) in view of Lundby (Patent No.: US 6,856,604 B2).

Regarding Claims 1 and 27, Lin et al. discloses a method (Figs. 5, 7) of communicating data comprising:

providing a first peer (Fig. 1, base station 116) and a second peer (Fig. 1, SCU 122);

successively transmitting a first predetermined number of more than one identical copies of a data block (Fig. 4, 402) with a first transmitter (Fig. 2, transmitter 202) of the first peer;

receiving at least two of the first predetermined number of identical copies of the data block (Fig. 4, 402) with a second receiver (Fig. 3, receiver 304) of the second peer; and

combining more than one corrupted received data blocks to form a complete copy of the data block (Fig. 4, error-tolerant message 422, column 4, line 17) at the second peer.

Lin et al. fails to disclose transmitting and receiving identical copies of data, and combining corrupted data to form a complete copy of the data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting and receiving identical data because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Further, Lundby discloses combine corrupted data to attain the original information, column 5, lines 35-36.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's combining corrupted data to form a complete copy of the data because this would have enabled the base station to transmit information to a remote station using a format where data was repeated in a packet, column 5, lines 33-35.

Regarding Claim 2, Lin et al. discloses the method of claim 1 wherein combining more than one corrupted received data blocks (SCR's 122 received corrupted messages and unable to reconstruct the received messages, column 3, lines 56-58) to form a complete copy of the data block (Fig. 4, 402) at the second peer further comprises:

transmitting a response to the complete copy of the data block with a second transmitter (SCR 122 request retransmission (second transmitter), column 3, lines 61-62) of the second peer.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting identical data because this would have

allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claim 3, Lin et al. discloses the method of claim 2 further comprising:

successively transmitting a second predetermined number of more than one identical copies of the response with the second transmitter of the second peer.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting identical data because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claims 4 and 26, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) and method (Figs. 5, 7) wherein the second predetermined number is an odd number (error-tolerant message comprises forty five elements, column 6, lines 49-51).

Regarding Claim 5, Lin et al. discloses the method of claim 1 wherein successively transmitting a first predetermined number of more than one identical copies of a data block (Fig. 4, 402) with a first transmitter (Fig. 2, transmitter 202) of the first peer further comprises:

correctly receiving an expected response of the data block with a first receiver (controller 112 delivers the received messages to the base station 116, column 2, lines 13-15) of the first peer; and

disabling the successive transmission of the data block (SCR 122 to request retransmission of portions of corrupted messages that are unrecoverable, column 3, lines 61-65) of the first transmitter of the first peer.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting identical data because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claims 6 and 15, Lin et al. discloses the transmitting peer (Fig. 1, base station 116) and method (Figs. 5, 7) wherein the expected response is a positive acknowledgment of the data block (error-correction algorithm is recursively applied to the original message and subsequent by-products therefrom, until an error-tolerant message has been generated, column 4, lines 1-4).

Regarding Claims 7 and 16, Lin et al. discloses the transmitting peer (Fig. 1, base station 116) and method (Figs. 5, 7) wherein the expected response is in a group of possible responding messages of the data block (group of SCR 122's receiving corrupted messages cannot

successfully reconstruct the received messages, request retransmission of portions of corrupted messages, column 3, lines 56-62).

Regarding Claim 8, Lin et al. discloses the method of claim 1 wherein said successive transmitting and said receiving are performed over a dedicated channel (communication links such as microwave links, column 2, lines 4-5; receiver 304 and antenna 302 are conventional RF elements which form a receiver circuit for receiving message transmitted by the base station 116, column 2, lines 36-39) shared only by the first and second peers.

Regarding Claims 9 and 21, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) and method (Figs. 5, 7) wherein combining more than one corrupted received data blocks comprises taking a rounded arithmetic average for each bit (bit error rate after a first application of an error correction algorithm is 1 bit error for every 10,000 bits, column 3, lines 26-28) of these received data blocks.

Regarding Claims 10 and 22, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) and method (Figs. 5, 7) wherein the number of combined corrupted received data blocks is an odd number (error-tolerant message comprises forty five elements, column 6, lines 49-51).

Regarding claims 11 and 23, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) and method (Figs. 5, 7) wherein the second processor is capable of performing a majority vote for each bit (combining matrixes and for each of these matrixes are 10 01 -11 10 (with a majority

vote of 1), column 8, lines 34-41) among the received data blocks when combining more than one corrupted received data blocks, wherein the majority vote means that the combining result of a bit is equal to the value of the bit that happens more frequently than other values of the bit in the corrupted received data blocks (second matrix has more than two corrupted groups and the combining matrixes and for each of these matrixes are 10 01 -11 10 (with a majority vote of 1), column 8, lines 24-41).

Regarding Claims 12 and 18, Lin et al. discloses the transmitting peer and method wherein the first predetermined number is an odd number (error-tolerant message comprises forty five elements, column 6, lines 49-51).

Regarding Claim 13, Lin et al. discloses a transmitting peer (Fig. 1, base station 116) of a communications system (Fig. 1, communicating system, column 1, lines 47-48) comprising:

a first antenna (Fig. 2, 201) coupled to a second antenna (Fig. 3, 302) of a receiving peer (Fig. 1, SCU 122) via a transmission medium (communication links such as microwave links, column 2, lines 4-5);

a first transmitter (Fig. 2, transmitter 202) electrically connected to the first antenna for transmitting data blocks;

a first receiver (Fig. 2, caller interface for receiving messages from the PSTN 110, column 2, lines 23-24) electrically connected to the first antenna for receiving a response from the receiving peer (Fig. 1, SCU 122);

a first processor (Fig. 2, processing system 210) electrically connected to the first transmitter for controlling the first transmitter to successively transmit a first predetermined number of more than one identical copies of a data block (Fig. 4, 402) of a data block (Fig. 4, 402) via the first antenna; and

a first power supply (Fig. 1, electrical block diagram of the fixed portion 102 includes the base stations 116, column 2, lines 19-20) electrically connected to the first transmitter and the first processor;

wherein the first processor is capable of detecting an expected response (SCR 122 request retransmission of portions of corrupted messages, column 3, lines 61-62) of the data block at the first receiver, and accordingly disabling the successive transmission of identical copies of the data block (information dispersal algorithm applies the error correction algorithm recursively to the original message and subsequent by-products therefrom (disabling transmission) until the problems are overcome and an error-tolerant message has been generated, columns 3 and 4, lines 67 and 1-4 respectively) at the first transmitter.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting identical data because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claim 14, Lin et al. discloses the transmitting peer of claim 13 wherein the first antenna comprises two sets of antenna units (Fig. 2, RF transmitter 202 coupled to an antenna 201 which together form a transmitter circuit for transmitting received messages, column 2, lines 30-32), one electrically connected to the first transmitter and the other electrically connected to the first receiver (Fig. 3).

Regarding Claims 17 and 20, Lin et al. discloses the transmitting peer (Fig. 1, base station 116) and receiving peer (Fig. 1, SCU 122) wherein the transmission medium is a dedicated channel of electromagnetic waves (Fig. 1, 102 controls a plurality of base stations 116 by way of communication links such as microwave links, column 2, lines 2-5).

Regarding Claim 19, Lin et al. discloses a receiving peer (Fig. 1, SCU 122) of a communications system (Fig. 1, communicating system, column 1, lines 47-48) comprising:

a second antenna (Fig. 3, 302) coupled to a first antenna (Fig. 2, 201) of a transmitting peer (Fig. 2, transmitter 202) via a transmission medium (communication links such as microwave links, column 2, lines 4-5);

a second receiver (Fig. 3, receiver 304) electrically connected to the second antenna for receiving data blocks;

a second processor (Fig. 1, SCUs 122; Fig. 3, processor 310) electrically connected to the second receiver for combining more than one data blocks (combination matrix used for reconstructing the original message and information indicating the number of times the

combining matrix is to be applied to the error-tolerant message for reconstructing the original message, column 7, lines 25-29) received successively to form a complete copy of the data block; and

a second power supply (Fig. 3, power switch 304) electrically connected to the second receiver and the second processor; and

a second transmitter (Fig. 1, bases stations 116, base station which comprises a transmitter coupled to an antenna which together forms a transmitter circuit for transmitting the messages, column 2, lines 12-15; SCR 122 request retransmission (second transmitter), column 3, lines 61-62) for transmitting a response to the transmitting peer (SCR 122 request retransmission of portions of corrupted messages, column 3, lines 61-62) when the second processor (Fig. 3, processor 310) forms a complete copy of the data block.

Lin et al. fails to disclose complete copy of the data.

But, Lundby discloses the remote station receive the uncorrupted data (block), column 5, lines 38-40.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's complete copy of the data because this would have allowed the this would have enabled the base station to transmit information to a remote station using a format where data was repeated in a packet, column 5, lines 33-35

Regarding Claim 25, Lin et al. discloses the receiving peer of claim 19 wherein the second

transmitter is capable of successively transmitting a second predetermined number (Fig. 4, 406) of more than one identical copies of the response.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data to multiple users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's transmitting identical data because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Response to Arguments

2. Applicant's arguments filed March 6, 2009 have been fully considered as follows:

- In the remarks on pages 7-8 of the amendment, applicant contends neither Lin et al. nor Lundby taught sending multiple identical copies of data block to a single user.
- The examiner respectfully maintains the prior prosecution of the claim limitation in that Lundby discloses multiple transmissions with the same data, column 2, line 2 and transmitting identical data to multiple users, column 2, line 4. The claim limitation did not specify a single user. In fact, receiving the identical copies with a second receiver (user) intimated that there was a first receiver (user).

- In the remarks on page 8 of the amendment , applicant contends that neither Lin et al. nor Lundby teach the features of a first processor electrically connected to the first transmitter for controlling the first transmitter to successively transmit a first predetermined number of more than one identical copies of a data block via the first antenna.
- The examiner maintains the prior prosecution of the claim limitation in that Lin et al. discloses a first processor (Fig. 2, processing system 210) electrically connected to the first transmitter (Fig. 2, transmitter 202) for controlling the first transmitter (Fig. 2, antenna 201) to successively transmit a first predetermined number of more than one identical copies of a data block (transmitter coupled to an antenna which together form transmitter circuit for transmitting the received messages, column 2, lines 13-15) via the first antenna. Further, the processing system for controlling the operation of the base station which comprises a transmitter coupled to an antenna which together forms a transmitter circuit for transmitting the messages, column 2, lines 5-15.

- In remarks on page 9 of the amendment, applicant contends that Lin et al. does not teach a second transmitter for transmitting a response to the transmitting peer when the second processor forms a complete copy of the data block. And, Lundby does not disclose the remote station sending a

response to the base station when the remote station receives an uncorrupted data block.

- The examiner respectfully contends that Lin et al. discloses a second transmitter (Fig. 1, bases stations 116, base station which comprises a transmitter coupled to an antenna which together forms a transmitter circuit for transmitting the messages, column 2, lines 12-15) for transmitting a response to the transmitting peer when the second processor (Fig. 1,
- SCUs 122; Fig. 3, 310) forms a complete copy of the data block. And, Lundby discloses (that the receiving party receives the uncorrupted data and the same information is being carried to the remote stations, column 5, lines 39-41).

Conclusion

3. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LA/la
May 24, 2009

/Kevin C. Harper/

Primary Examiner, Art Unit 2416